

Title (en)

A power amplifier distortion compensation apparatus and method thereof

Title (de)

Ein Leistungsverstärkergerät mit Verzerrungskompensation und Verfahren dazu

Title (fr)

Un appareil d'amplification de puissance à compensation de distorsion et sa méthode

Publication

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Application

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Priority

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Abstract (en)

A distortion compensation apparatus and method for a power amplifier enable accurate distortion compensation, even if frequency amplitude deviation and group delay error are present in the power amplifier. A reverse distortion coefficient is read from a reverse distortion coefficient table. A distortion compensation process is performed on an incoming signal using the read reverse distortion coefficient. The distortion compensated signal is amplified and transmitted by the power amplifier, and the reverse distortion coefficient table is updated based on the incoming signal before distortion compensation, and the output signal of the power amplifier. The relation between the phase of the time difference value and the reverse distortion coefficient is obtained from the reverse distortion coefficient corresponding to a linear operation domain of the power amplifier. A frequency characteristic of a frequency characteristic compensation filter, to which the distortion compensated signal is supplied, is set such that inclination of the phase of the reverse distortion coefficient becomes small, thereby accurate distortion compensation can be performed even if frequency amplitude deviation is present in the power amplifier. <IMAGE>

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